

REMARKS

Claims 1-19 and 21-46 are pending in the current application, with claim 20 being cancelled and claims 27-46 being newly presented for examination by this Amendment. Claims 1-26 currently stand rejected, and claims 1-19 and 21-26 have been amended. Reconsideration and allowance of claims 1-19 and 21-46 are respectfully requested in light of the preceding amendments and following remarks.

Claim Rejections – 35 U.S.C. § 101

Claims 1-22 stand rejected under 35 U.S.C. § 101 because the claims are directed to nonfunctional descriptive material. Applicants respectfully traverse this rejection for the reasons detailed below.

The Examiner states that the claim recites purely nonfunctional descriptive material because they are not embodied in a computer-readable medium. Applicants respectfully submit that the claims have been amended to clarify that a “computer-readable medium” is being claimed, such that the claimed functional descriptive material is stored on the computer-readable medium and executable therefrom.

Further, the Examiner states that data structures, even if recited as recorded on a computer readable medium, do not constitute statutory subject matter if merely read or output by a computer. Applicants respectfully submit that MPEP § 2106.01 states the following:

In this context, “functional descriptive material” consists of **data structures** and computer programs which impart functionality

when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

Applicants thus submit that data structures recorded on a computer readable medium may constitute statutory subject matter. MPEP § 2106.01 further states:

Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, [*In re Warmerdam*,] 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (discussing patentable weight of data structure limitations in the context of a statutory claim to a data structure stored on a computer readable medium that increases computer efficiency) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory).

In view of the above, a more detailed discussion of *In re Lowry* is warranted.

Claim 1 of the patent at issue in *In re Lowry* recites:

1. A memory for storing data for access by an application program being executed on a data processing system, comprising:

a data structure stored in said memory, said data structure including information resident in a database used by said application program and including;

a plurality of attribute data objects stored in said memory, each of said attribute data objects containing different information from said database; a single holder attribute data object for each of said attribute data objects, each of said holder attribute data objects being one of said plurality of attribute data

objects, a being-held relationship existing between each attribute data object and its holder attribute data object, and each of said attribute data objects having a being-held relationship with only a single other attribute data object, thereby establishing a hierarchy of said plurality of attribute data objects; a referent attribute data object for at least one of said attribute data objects, said referent attribute data object being nonhierarchically related to a holder attribute data object for the same at least one of said attribute data objects and also being one of said plurality of attribute data objects, attribute data objects for which there exist only holder attribute data objects being called element data objects, and attribute data objects for which there also exist referent attribute data objects being called relation data objects; and an apex data object stored in said memory and having no being-held relationship with any of said attribute data objects, however, at least one of said attribute data objects having a being-held relationship with said apex data object.

In finding that the printed matter cases have no factual relevance to the claims at issue in In re Lowry, the court stated:

Nor are the data structures analogous to printed matter. Lowry's ADOs do not represent merely underlying data in a database. ADOs contain both information used by application programs and information regarding their physical interrelationships within a memory. Lowry's claims dictate how application programs manage information. Thus, Lowry's claims define functional characteristics of the memory.

In re Lowry, at 1034. The court further noted:

Indeed, Lowry does not seek to patent the Attributive data model in the abstract. Nor does he seek to patent the content of information resident in a database. **Rather, Lowry's data structures impose a physical organization on the data.**

Id. (emphasis added). And, on the issue of abstract ideas, the Federal Circuit in In re Lowry noted:

More than mere abstraction, the data structures are specific electrical or magnetic structural elements in a memory. According to Lowry, **the data structures provide tangible benefits: data stored in accordance with the claimed data structures are more easily accessed, stored, and erased.**

Lowry further notes that, unlike prior art data structures, Lowry's data structures simultaneously represent complex data accurately and enable powerful nested operations. **In short, Lowry's data structures are physical entities that provide increased efficiency in computer operation.**

Id. at 1035 (emphasis added).

The claims are analogous to the claims in In re Lowry, and as such are statutory subject matter. Unlike the claims of In re Warmerdam, the claims of the subject application do not recite mathematical equations, or the generation of data structures using mathematical equations. Rather, as in In re Lowry, the claims recite a “computer readable medium **storing an executable** data structure” that dictates how application programs manage data. Accordingly, because the recited computer readable medium stores a data structure for “managing” multiple component data, the claims are directed toward a computer readable medium storing functional descriptive material. Put in the language of MPEP § 2106.01, the claims are directed to a claimed computer readable medium storing a data structure defining structural and functional interrelationships between the file directory and the computer software and hardware components which permit the directory's functionality to be realized, and is thus statutory.

In light of the above, Applicants respectfully request that the rejection of claims 1-19, 21, and 22 under 35 U.S.C. § 101 be withdrawn.

Claim Rejections – 35 U.S.C. § 102

Claims 1-4 and 9-26 stand rejected under 35 U.S.C. § 102(e) as being anticipated by US Pat Pub 2002/0106196 to Yamauchi et al. (“Yamauchi”). Applicants respectfully traverse this rejection for the reasons detailed below.

With regard to claim 1, the Examiner states that Yamauchi teaches each and every element of this claim. Applicants respectfully submit that claim 1 has been amended to further recite “a management area separate from the data area” that stores an “entry point map” identifying entry points and “**mapping presentation start time information to address information**” for “an associated clip file” in the data area. Yamauchi discloses PGC information containing VOB address information, which indicates a location, length, and/or order of content. See Yamauchi, ¶¶ [0191]-[0194]; FIGS. 15, 16A, 16B. The PGC information in Yamauchi does not contain presentation **start time** information; rather, Yamauchi discloses only VOB presentation **length**. See Yamauchi, FIG. 15, “VOB#1 (10min.) VOB#2 (50sec.) VOB#3 (8min.) VOB#4 (48min.)” Further, by teaching content order information, Yamauchi suggests that content addresses are not being mapped to individual start times because the content – VOBs - are presented in the disclosed order, regardless of what time the content is reached in that order. See Yamauchi, ¶ [0192]. Thus, Yamauchi does not teach or suggest presentation start time information mapped to address information as recited in claim 1.

Because Yamauchi fails to teach or suggest each and every element of claim 1, Yamauchi cannot anticipate or render obvious this claim. Claims 19

and 23-26 are equally allowable over Yamauchi at least for reciting similar unique features as those discussed above in connection with claim 1. Claims 2-18, 21, and 22 are allowable at least for depending from an allowable base claim. Withdrawal of the rejection to claims 1-4 and 9-26 under 35 U.S.C. § 102(e) is respectfully requested.

Claim Rejections – 35 U.S.C. § 103

Claims 5-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamauchi in view of Official Notice. The Official Notice does not cure, nor does the Examiner take Official Notice for curing, the differences between claim 1 and Yamauchi discussed above. Because Yamauchi, alone or in combination with the Official Notice, fails to teach or suggest each and every element of claim 1, these references cannot anticipate or render obvious claim 1. Claims 2-18 are allowable at least for depending from an allowable base claims. Withdrawal of the rejection to claims 5-8 under 35 U.S.C. § 103(a) is respectfully requested.

New Claims 27-46

Applicants respectfully request consideration and allowance of claims 27-46 newly presented for examination in this Amendment. Applicants respectfully submit that, in view of the allowability of claims 1-19 and 21-26 discussed above, claims 27-46 are allowable at least for depending from an allowable base claim.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of claims 1-19 and 21-46 in connection with the present application are earnestly solicited.


Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Gary D. Yacura at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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By



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